

5

Science Standard  
5.3.b.



# Changing States: Water, Natural Systems, and Human Communities

## California Education and the Environment Initiative

Approved by the California State Board of Education, 2010

### The Education and the Environment Curriculum is a cooperative endeavor of the following entities:

California Environmental Protection Agency  
California Natural Resources Agency  
Office of the Secretary of Education  
California State Board of Education  
California Department of Education  
California Integrated Waste Management Board

### Key Leadership for the Education and Environment Initiative:

**Linda Adams**, Secretary, California Environmental Protection Agency  
**Patty Zwarts**, Deputy Secretary for Policy and Legislation, California Environmental Protection Agency  
**Andrea Lewis**, Assistant Secretary for Education and Quality Programs, California Environmental Protection Agency  
**Mark Leary**, Executive Director, California Integrated Waste Management Board  
**Mindy Fox**, Director, Office of Education and the Environment, California Integrated Waste Management Board

### Key Partners:

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Valuable assistance with maps, photos, videos and design was provided by the **National Geographic Society** under a contract with the State of California.

### Office of Education and the Environment

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## **Lesson 1    Evaporation, the Water Cycle, and Human Communities**

None required for this Lesson.

## **Lesson 2    Factors Affecting the Evaporation Rate**

None required for this Lesson.

## **Lesson 3    How the Water Cycle Affects Natural Systems**

None required for this Lesson.

## **Lesson 4    The Cooling Effects of Evaporation**

None required for this Lesson.

## **Lesson 5    The Role of Condensation in Natural Systems**

None required for this Lesson.

## **Lesson 6    Freezing in Natural Systems and Human Communities**

None required for this Lesson.

## **Assessments**

The Changing States of Water—Traditional Unit Assessment Master . . . . . 2

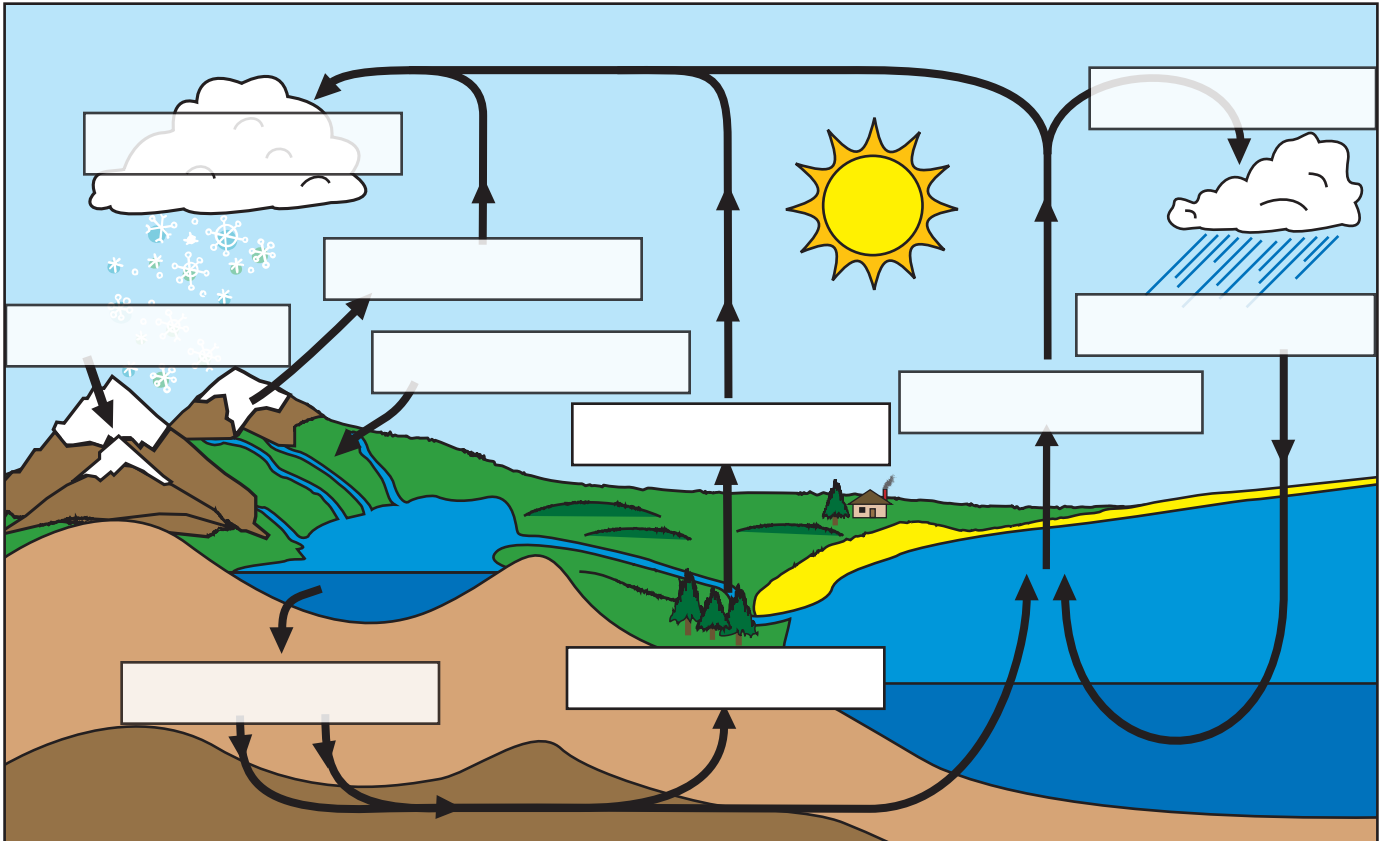
The Changing States of Water Study Cards —

Alternative Unit Assessment Master. . . . . 5

Name: \_\_\_\_\_

**Instructions:** Complete the diagram below.

- Write the name of the following water cycle processes in the spaces on the diagram. Some of them may be written more than once, and some spaces may be left blank: evaporation, condensation, plant uptake, and transpiration. (12 points)



**Instructions:** Complete the statements below. (3 points each)

- Evaporation is important to people because it \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
- Condensation is important to people because it \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## The Changing States of Water

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Name: \_\_\_\_\_

4. Transpiration is important to people because it \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
5. The Sun is an important part of the water cycle because it \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
6. Clouds are important to people because they \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Instructions:** Select the best answer and circle the correct letter. (1 point each)

- |  |  |
|--|--|
| 7. One way to separate salt from saltwater is:<br>a. transpiration<br>b. evaporation<br>c. freezing<br>d. condensation | 10. Evaporation speeds up when:<br>a. temperatures go up<br>b. there is no more water<br>c. temperatures go down<br>d. there are more clouds |
| 8. When water is a gas it is called:<br>a. water vapor<br>b. ice crystals<br>c. frost point<br>d. dew point            | 11. Water vapor becomes a liquid during:<br>a. transpiration<br>b. condensation<br>c. melting<br>d. evaporation                              |
| 9. When water evaporates, its molecules:<br>a. disappear<br>b. slow down<br>c. cling together<br>d. take in heat       |  |

Name: \_\_\_\_\_

**Instructions:** Use the words in the Word Bank to fill in the blanks below. (1 point each)

**Word Bank**

dew	evaporation	condensation	transpiration
solid	clouds	frost	

11. Through the process of \_\_\_\_\_, water vapor becomes part of Earth's atmosphere.
12. Water vapor that condenses and then freezes is called \_\_\_\_\_.
13. Water vapor condenses to a liquid called \_\_\_\_\_.
14. During \_\_\_\_\_ plants give off water vapor into the air.

**Instructions:** Answer the following question in one or more paragraphs. (4 points)

15. How is the water cycle important to people and other living things on Earth?

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## The Changing States of Water Study Cards

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Name: \_\_\_\_\_

### Instructions:

1. Carefully cut apart your set of **The Changing States of Water Study Cards**.
2. Answer the questions on each card in the space provided. (10 points each).
3. You may use your work from the unit to answer the questions.
4. Work individually to write your answers, but you may review your answers with a partner when you are finished.
5. Turn in your cards when you are finished.

Question	Answer
1. What happens when water evaporates?	1. _____ _____ _____ _____
2. What happens when saltwater is heated?	2. _____ _____ _____ _____
3. Name three factors that affect the rate of evaporation.	3. _____ _____ _____ _____

## The Changing States of Water Study Cards

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Name: \_\_\_\_\_

fold

### Question

### Answer

4. How can frost affect California's economy?

4. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Question

### Answer

5. How does water vapor become a liquid?

5. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Question

### Answer

6. How can plants help to cool city areas?

6. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Question

### Answer

7. How does transpiration help plants?

7. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



## The Changing States of Water Study Cards

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Name: \_\_\_\_\_

Question	Answer
8. What is dew?	8. _____ _____ _____ _____
9. When does condensation occur?	9. _____ _____ _____ _____
10. In what form do water molecules have the least heat energy?	10. _____ _____ _____ _____







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